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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,071	01/12/2006	Andreas Gottschalk	STERN24.001APC	7547

20995 7590 11/03/2009
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EXAMINER

JACOBS, TODD D

ART UNIT	PAPER NUMBER
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3746

NOTIFICATION DATE	DELIVERY MODE
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11/03/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/530,071	Applicant(s) GOTTSCHALK, ANDREAS	
	Examiner TODD D. JACOBS	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3746

DETAILED ACTION

1. This office action is in response to the amendment of 7/28/2009. Note that in making the below rejections, the examiner has considered and addressed each of the applicant's arguments/amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-9, 11-13, 15-20, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764).

3. In re claims 1, 5-6, 11, 16-18, Magnus teaches a pumping apparatus with a peristaltic drive device for pumping a medium through a hose (4) having at least one compressible portion, containing a one-piece shaft (figure 3) with integral cams (7) arranged so as to be offset with respect to one another and with attached lamellae (2), the shaft being configured to guide movement of the lamellae in both forward and backward directions (since the lamellae are attached to the asymmetrically designed shaft, as the shaft turns from 0 degrees to 180 degrees, the lamellae are guided in a forward direction, and as the shaft turns from 180 degrees towards 360/0 degrees, the lamellae are guided in a backward direction), wherein the cams are cam segments, and wherein the shaft is without a core shaft (no solid shaft upon which the cam segments are mounted as shown in figure 5) and essentially without a continuous core region.

4. Magnus fails to teach that the one-piece shaft comprises a single homogenous piece of material. Smith et al, Nakamura et al and Itabashi et al all teach integrally cast cam shafts made

Art Unit: 3746

of a homogenous piece of material. It would have been obvious to one of ordinary skill in the art at the time of the invention to have made the shaft and cams of Magnus from one-piece as taught by Smith et al, Nakamura et al and Itabashi et al as a design choice and since it has been held that making in one-piece which has formerly been multiple pieces is a matter of obvious engineering choice. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

5. In re claims 3-4 and 15, Magnus also teaches a counter pressure plate 6 for applying the hose, and for supporting the pressure exerted on the hose by the lamellae wherein the counter pressure plate is sprung within the housing of the apparatus by one ore more springs (column 4, lines 22-27), and also generating a sinusoidal pinching movement of the lamellae as clearly shown in figure 1.

6. In re claims 7-8 and 12-13, Magnus also suggests assembling the shaft structure in whatever structure is required for varying squeezing contours resulting in varying pumping rates and amounts (see column 4, lines 28-36). Also, Magnus fails to make explicit mention of that the cam segments are offset with respect to one another in such a way that only one cam segment is at a maximum distance from an imaginary line of the shaft and a uniform offset of the cam segments is provided. However, such a structure is a mere rearrangement of parts and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and Magnus discuss rearranging the cams and structuring the eccentric shaft in a manner corresponding to a desired squeezing contour for the purpose of achieving a desired pumping rate and volume (see column 4, lines 28-36). In likewise fashion, the desire to pinch the hose so that a volume can be enclosed in leak-tight manner at the first and last cam segment and the remaining lamellae serve for the reduction in volume or wherein the first and last lamellae are switched as a valve and the remaining lamellae are set in such a way that in

Art Unit: 3746

any position, at least a narrow gap remains between the walls of the hose acted upon by the lamellae results only in a mere rearrangements of parts. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and such a rearrangement is suggested by Magnus for the purpose of adjusting the desired squeezing contour and therefore, the desired pumping rate and volume (see column 4, lines 28-36).

7. In re claim 9, see Magnus col. 1 lines 59-62.

8. In re claim 19, Magnus teaches the invention as claimed and teaches wherein the ratio of the lamellae height to the lamellae stroke ranges from *about* (emphasis added) is 4:1 to 1:1. Note that, and not discrediting the previous statement, Magnus does not fully disclose the ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reach such a ratio, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

9. In re claim 20, Magnus discloses the cam segments defining a core orifice (space between W and 1 as shown in Fig 1 of Magnus; also could be any one of item 9 in Fig 5).

10. In re claim 35, the above combination discloses all limitations except where the ratio between the outer diameter and the stroke is less than 4:1. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have this ratio be less than 4:1 since the claimed values are merely an optimum value. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Also see *In re Aller*, 105 USPQ 233 because optimum ranges are also obvious variants.

Art Unit: 3746

11. Claims 21-32, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764) and further in view of Goi et al (5,263,830).

12. In re claims 21-23, 25-26, 30-34, the limitations are met entirely by the references as discussed in the rejections above.

13. However, Magnus, Itabashi, Nakamura and Smith all lack the teaching of a continuous core region (ie a shaft, cam or similar going from end to end of what is considered the shaft above). Goi et al teaches a continuous core region of a cam shaft. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have provided the cam shaft of Magnus as modified by either Smith, Nakamura or Itabashi with a core shaft merely to provide a support to form the cams on and to increase the torsional strength of the shaft. However, Goi does lack the specific size of the continuous core region (for instance, it being less than 3mm). Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the continuous core region less than 3mm since the claimed values are merely an optimum value. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Also, note *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package “of appreciable size and weight requiring handling by a lift truck” where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) (“mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled.” 531 F.2d at 1053, 189 USPQ at 148.)

Art Unit: 3746

14. In re claims 27-28, Magnus also suggests assembling the shaft structure in whatever structure is required for varying squeezing contours resulting in varying pumping rates and amounts (see column 4, lines 28-36). Also, Magnus fails to make explicit mention of that the cam segments are offset with respect to one another in such a way that only one cam segment is at a maximum distance from an imaginary line of the shaft and a uniform offset of the cam segments is provided. However, such a structure is a mere rearrangement of parts and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and Magnus discuss rearranging the cams and structuring the eccentric shaft in a manner corresponding to a desired squeezing contour for the purpose of achieving a desired pumping rate and volume (see column 4, lines 28-36). In likewise fashion, the desire to pinch the hose so that a volume can be enclosed in leak-tight manner at the first and last cam segment and the remaining lamellae serve for the reduction in volume or wherein the first and last lamellae are switched as a valve and the remaining lamellae are set in such a way that in any position, at least a narrow gap remains between the walls of the hose acted upon by the lamellae results only in a mere rearrangements of parts. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70 and such a rearrangement is suggested by Magnus for the purpose of adjusting the desired squeezing contour and therefore, the desired pumping rate and volume (see column 4, lines 28-36).

15. In re claim 29, see Magnus col. 1 lines 59-62.

16. In re claim 24, the above combination fails to disclose wherein the ratio between the outer diameter and the stroke is less than 4:1. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have this ratio be less than 4:1 since the claimed values are merely an optimum value. It has been held that discovering an optimum value of a result effective variable involves only routine skill

Art Unit: 3746

in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Also see *In re Aller*, 105 USPQ 233 because optimum ranges are also obvious variants.

17. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764) and further in view of Romanelli et al. 4,755,168.

18. Magnus teaches the invention as claimed and as discussed above but fails to teach the following claimed limitation as taught by Romanelli: a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the structure of Magnus with a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract).

19. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Magnus 5,558,507 in view of Itabashi et al (5676192) or Nakamura et al (5778530) or Smith et al (6289764) in further view of Goi (5,263,830) and further in view of Romanelli et al. 4,755,168.

20. Magnus teaches the invention as claimed and as discussed above but fails to teach the following claimed limitation as taught by Romanelli: a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the structure of Magnus with a pumping of fluid in two directions for the purpose of performing both drainage and irrigation (Abstract).

Response to Arguments

21. Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argues that Magnus discloses a shaft made up of a continuous core region. However,

Art Unit: 3746

examiner again asserts that since these are stub shafts, they are not continuous (however, Goi discloses a continuous item (the shaft as described above)).

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TODD D. JACOBS whose telephone number is 571-270-5708. The examiner can normally be reached on Monday - Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
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3746

/TODD D. JACOBS/
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